

## Product datasheet for **RC222649**

### **EFS (NM\_005864) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	EFS (NM_005864) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	EFS
Synonyms:	CAS3; CASS3; EFS1; EFS2; HEFS; SIN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC222649 representing NM\_005864  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCATTGCCACGTCGACCCAGCTGGCCCGGGCACTGTATGACAACACCGCTGAGTCCCCCAGGAGC  
 TGTCTTCCGCCGAGGGATGTCTACGGTCTGCAGAGAGAGGGCGCTGGTGGACTGGACGGCTGGTG  
 CCTCTGCTCCCTACACGGCCAGCAGGGCATTGTGCCCGCCAACAGGGTGAAGCTCTTGCCTGCTGGCCCA  
 GCACCAAGCCCAGCCTCTCTCCTGCGTCCCCAGCCAGCCTGGCTACCATATCCAGCCCCAGATCACA  
 GCAATGAGGACCAGGAGGTGTATGTGGTCCGCCCCAGCTCGGCCCTGTCCAACCTCAGGACCTCCAGC  
 TGGACCTTGCCACCCTCTCCTGACCTCATCTACAAAATCCCCAGAGCTAGTGGGACCCAGCTGGCTGT  
 CCCAGAGATGCCTGGAGGTCTACGATGTGCCCCACC GCCCTCCGGGTGCCCTCCAGTGGCCCTATG  
 ACTGCCCTGCCTCTTTCCACCCTTGACCCGGTTGCCCGCAGCCCCCTGGAGAGGATGATGTCTCC  
 CTATGATGTGCCCTGACCCCAAAGCCACTGCAGAGCTGGAACAGATCTGGAGTGGGAAGGAGGCCGG  
 GAGCCGGGGCCCCCATCTATGCTGCCCCCTCAAACCTGAAACGAGCGTACGCTTACTCAATTTGTATG  
 AAGCACCCGAGGAAGTGTGGCAGACGGGAGGGCGGGGCACTGATGAGGGGATCTACGATGTGCCCTCT  
 GCTGGGGCCAGAGGCTCCCCCTTCTCCAGAGCCCCCTGGAGCCTTGGCCTCCCATGACCAGGACACCCTG  
 GCCCAGCTTCTGGCCAGAAGCCCCCACCCACACAGGCCCGGCTCCCCTCAGCTGAGAGCCTGTCCC  
 GCCGCCCTCTGCCTGCCTGCCTGTCCCTGAGGCCCCAGCCCCCTCCCAGTGCCTCTCCTGCCCCAGG  
 CCGGAAGGGCAGCATCCAGGACCGGCTCTGCCCCACCCACCCCGCTGCCTGGTTATGGAGGCCCC  
 AAGGTCGAGGGGGATCCAGAGGGCAGGGAGATGGAGGATGACCCAGCAGGACACCACAATGAGTACGAGG  
 GCATTCGATGGCCGAGGAGTACTACTGTCCACCTGAAGGGCATGGACAAAGCTCAGGGATCTAGGCC  
 CCCGGATCAGGCCTGCACAGGGGATCCTGAACTGCCCGAGAGGGGGATGCCGGCGCCGACAGGAGCCCTG  
 TCCCCAGGGGAGCCACTGTTGTGTCCACCGAGATCTGCAGCTCCTGTACTTCTATGCTGGCAATGCC  
 AGAGCCACTACTCAGCCCTGCAGGCAGCCGTGGCAGCCCTGATGTCCAGTACCCAGGCTAATCAGCCCC  
 GCGCCTTTTCGTGCCCCACAGCAAGAGGGTGGTGGTGGCTGCTCATCGCCTGGTGTGTTGGGGACACC  
 CTGGGCCGGTGGCAGCCTCTGCCCTCTGAGAGCACAGGTGAGGGTGCAGGTACAGCACTGGGCCAGG  
 CATTGCGGGCCACTGTGTGGCTGTCAAGGAGCTGCCCTGGGCTACCCATCCAGCCCTGCCATCCAAGA  
 GATGGTGCAGTGTGAACAGAAGTGGCAGGGCAGGCCCTGCAATCACTACCCTGCTCACTAGCCTGGCT  
 CCA

**ACGCGT**ACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC222649 representing NM\_005864  
 Red=Cloning site Green=Tags(s)

MAIATSTQLARALYDNTAESPQELSFRRGDVLRVLQREGAGGLDGWCLCSLHGQQGIVPANRVKLLPAGP  
 APKPSLSPASPAQPGSPYPAPDHSNEDQEYVVVPPPARPCPTSGPPAGPCPPSPDLIYKIPRASGTQLAA  
 PRDALEVYDVPPTALRVPSSGPYDCPASFSHPLTRVAPQPPGEDDAPYDVPLTPKPPAELEPDLEWEGGR  
 EPGPIIYAAPSNLKRASALLNL YEAPPELLADGEGGGTDEGIYDVPLLGPEAPPSPPEPPGALASHDQDTL  
 AQLLARSPPPHRPRLPSAESLSRRPLPALVPEAPSPSPVSPAPGRKGSIQDRPLPPPPRPLPGYGGP  
 KVEGDPEGREMEDDPAGHHNEYEGIPMAEYDYVHLKGMDKAQGSRPPDQACTGDPPELPERGMPAPQEAL  
 SPGEPLVVSTGDLQLLYFYAGQCQSHYSALQAAVAALMSSTQANQPPRLFVPHSKRVVVAHRLVFGVDT  
 LGRLAASAPLRAQVRAAGTALGQALRATVLA VKGAALGYPSSPAIQEMVQCVELAGQALQFTLLTSLA  
 P

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8067\\_d02.zip](https://cdn.origene.com/chromatograms/mk8067_d02.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_005864

**ORF Size:** 1683 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
  5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_005864.4](#)

**RefSeq Size:** 3132 bp

**RefSeq ORF:** 1686 bp

**Locus ID:** 10278

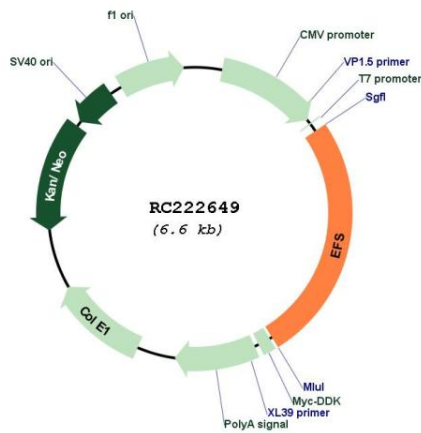
**UniProt ID:** [O43281](#)

**Cytogenetics:** 14q11.2

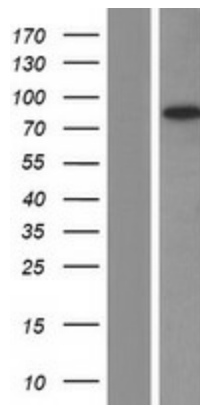
**MW:** 58.6 kDa

**Gene Summary:** The protein encoded by this gene is a member of the CAS (CRK-associated substrate) family of adaptor proteins which typically serve as scaffolds for the assembly of larger signaling complexes. These complexes form at the cell surface where integrin binding leads to the subsequent phosphorylation of a CAS protein. Additional binding of SRC family kinases leads to CAS hyperphosphorylation and the creation of binding sites for CRK and other proteins that cause actin cytoskeleton reorganization. This gene plays a role in integrin-mediated cell attachment, spreading, and migration and also plays a role in both normal and malignant cellular transformation. This broadly expressed gene has been shown to play a role in neurite outgrowth and its expression in the thymus and lymphocytes is important for T cell maturation and the development of immunological self-tolerance. Alternative splicing of this gene results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2020]

**Product images:**



Circular map for RC222649



Western blot validation of overexpression lysate (Cat# [LY417016]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222649 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).